

# Work Order ID 93054

November-13-12 2:24:49 PM

**\*93054\***

Page 1

Item ID: D4095-045

Accept

**\*N900040100\***

Setup Start **\*NS1\***

Revision ID:

Item Name: Wearplate Assembly

Stop **\*NS2\***

Start Date: 13/11/2012 Start Qty: 8.00

**\*8\***

Cust Item ID:

Required Date: 27/11/2012 Req'd Qty: 8.00

**\*8\***

Customer:

Reference:

Approvals: Process Plan: MLJ

Date: 12-11-13 Tooling:

Date:

Run Start **\*NR1\***

QC:

Date:

SPC (Y/N):

Date:

Stop **\*NR2\***

| Sequence ID/<br>Work Center ID | Operation<br>Description                | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp |
|--------------------------------|---|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
| <b>Draw Nbr</b>                | <b>Revision Nbr</b>                     |                      |         |        |              |               |               |                  |                |
| D4095                          | B                                       |                      |         |        |              |               |               |                  |                |
| 100                            |   | 0.00                 |         |        |              |               |               |                  |                |
| <b>*100*</b>                   | FLOW WATER JET                          |                      |         |        |              |               |               |                  |                |
| Waterjet                       | Memo                                    | 0.00                 |         |        |              |               |               |                  |                |
| FLOW CNC Waterjet              | 1-Cut as per Dwg (D4095-5)              |                      |         |        |              |               |               |                  |                |
| <u>304.063</u>                 | Dwg Rev: <u>B</u>                       |                      |         |        |              |               |               |                  |                |
|                                | Prog Rev: <u>B</u>                      |                      |         |        |              |               |               |                  |                |
|                                | 2-Deburr if necessary                   |                      |         |        |              |               |               |                  |                |
| 110                            |   | 0.00                 |         |        |              |               |               |                  |                |
| <b>*110*</b>                   | QC2- Inspect parts off machine FAI/FAIB |                      |         |        |              |               |               |                  |                |
| QC                             | Memo                                    | 0.00                 |         |        |              |               |               |                  |                |
| Quality Control                |   |                      |         |        |              |               |               |                  |                |
| 120                            |   | 0.00                 |         |        |              |               |               |                  |                |
| <b>*120*</b>                   | QC8- Inspect parts - second check       |                      |         |        |              |               |               |                  |                |
| QC                             | Memo                                    | 0.00                 |         |        |              |               |               |                  |                |
| Quality Control                |   |                      |         |        |              |               |               |                  |                |

(11)

131211-14

(11)

131211-14

15  
121120

11

NCR: Yes / No

**WORK ORDER NON-CONFORMANCE / UPDATE**

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

|  |   |   |                                      |                                    |                                    |                                      |                                    |                                    |  |                                  |  |                                    |  |                                |                                    |                                    |                                   |  |
|--|---|---|--------------------------------------|------------------------------------|------------------------------------|--------------------------------------|------------------------------------|------------------------------------|--|----------------------------------|--|------------------------------------|--|--------------------------------|------------------------------------|------------------------------------|-----------------------------------|--|
| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____ | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Work Order Update <input type="checkbox"/> | <b>AGAINST DEPARTMENT/PROCESS</b><br><br><table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table> | Skid-tube <input type="checkbox"/>   | Crosstube <input type="checkbox"/> | Water Jet <input type="checkbox"/> | Engineering <input type="checkbox"/> | Machining <input type="checkbox"/> | Small Fab <input type="checkbox"/> | Prod. Eng. Coord. <input type="checkbox"/> | Quality <input type="checkbox"/> | Thermoforming <input type="checkbox"/> | Finishing <input type="checkbox"/> | Rec/Store/Packaging <input type="checkbox"/> | Other <input type="checkbox"/> | Large Fab <input type="checkbox"/> | Composite <input type="checkbox"/> | Supplier <input type="checkbox"/> |  |
| Skid-tube <input type="checkbox"/>                           | Crosstube <input type="checkbox"/>  | Water Jet <input type="checkbox"/>  | Engineering <input type="checkbox"/> |                                    |                                    |                                      |                                    |                                    |  |                                  |  |                                    |  |                                |                                    |                                    |                                   |  |
| Machining <input type="checkbox"/>                           | Small Fab <input type="checkbox"/>  | Prod. Eng. Coord. <input type="checkbox"/>  | Quality <input type="checkbox"/>     |                                    |                                    |                                      |                                    |                                    |  |                                  |  |                                    |  |                                |                                    |                                    |                                   |  |
| Thermoforming <input type="checkbox"/>                       | Finishing <input type="checkbox"/>  | Rec/Store/Packaging <input type="checkbox"/>  | Other <input type="checkbox"/>       |                                    |                                    |                                      |                                    |                                    |  |                                  |  |                                    |  |                                |                                    |                                    |                                   |  |
| Large Fab <input type="checkbox"/>                           | Composite <input type="checkbox"/>  | Supplier <input type="checkbox"/>   |                                      |                                    |                                    |                                      |                                    |                                    |  |                                  |  |                                    |  |                                |                                    |                                    |                                   |  |

| Root Cause                             | Date | Step | Qty | Description of work order update or Non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector |
|--|------|------|-----|---|-------------------|--------------------|-------------|--------------|--------------|
| Doc/Data <input type="checkbox"/>      |      |      |     |   |                   |                    |             |              |              |
| Equip/Tooling <input type="checkbox"/> |      |      |     |   |                   |                    |             |              |              |
| Operator <input type="checkbox"/>      |      |      |     |   |                   |                    |             |              |              |
| Material <input type="checkbox"/>      |      |      |     |   |                   |                    |             |              |              |
| Setup <input type="checkbox"/>         |      |      |     |   |                   |                    |             |              |              |
| Other <input type="checkbox"/>         |      |      |     |   |                   |                    |             |              |              |
| Process <input type="checkbox"/>       |      |      |     |   |                   |                    |             |              |              |
| Supplier <input type="checkbox"/>      |      |      |     |   |                   |                    |             |              |              |
| Training <input type="checkbox"/>      |      |      |     |   |                   |                    |             |              |              |
| Unapproved <input type="checkbox"/>    |      |      |     |   |                   |                    |             |              |              |

**FAULT CATEGORY**

|  |   |   |  |   |
|--|---|---|--|---|
| <b>Landing Gear</b><br><input type="checkbox"/> Bending<br><input type="checkbox"/> Centre Not Concentric to O/S<br><input type="checkbox"/> Cracks<br><input type="checkbox"/> Crushed/Crimped.<br><input type="checkbox"/> Cuffs<br><input type="checkbox"/> Heat Treat<br><input type="checkbox"/> Inspection Strip in Tube<br><input type="checkbox"/> Ripples in Bend<br><input type="checkbox"/> Torque Waves in Extrusion<br><input type="checkbox"/> Turning Sequence<br><input type="checkbox"/> Wave/Twist in Tube | <b>General</b><br><input type="checkbox"/> Bend<br><input type="checkbox"/> BOM/Route<br><input type="checkbox"/> Broken/Damaged<br><input type="checkbox"/> Burrs<br><input type="checkbox"/> Contamination<br><input type="checkbox"/> Countersink<br><input type="checkbox"/> Cut Too Short<br><input type="checkbox"/> Drill Holes<br><input type="checkbox"/> Drawing<br><input type="checkbox"/> Finish<br><input type="checkbox"/> Folio | <input type="checkbox"/> Grain<br><input type="checkbox"/> Hardware<br><input type="checkbox"/> Inspection Incomplete<br><input type="checkbox"/> Instructions Incomplete/Unclear<br><input type="checkbox"/> Maintenance<br><input type="checkbox"/> Mislabeled<br><input type="checkbox"/> Misread<br><input type="checkbox"/> Offset<br><input type="checkbox"/> Out of Calibration<br><input type="checkbox"/> Out of Sequence<br><input type="checkbox"/> Outside Dimensions | <input type="checkbox"/> Ovalized<br><input type="checkbox"/> Over/Under tolerance<br><input type="checkbox"/> Part Incorrect<br><input type="checkbox"/> Part Lost/Missing<br><input type="checkbox"/> Part Moved<br><input type="checkbox"/> Positioned Wrong<br><input type="checkbox"/> Power Loss/Surge | <input type="checkbox"/> Pressure/Forced<br><input type="checkbox"/> Temperature/Cure<br><input type="checkbox"/> Weld<br><input type="checkbox"/> Wrong Stock Pulled<br><br><input type="checkbox"/> Other |
|--|---|---|--|---|



NCR: Yes / No

**WORK ORDER NON-CONFORMANCE / UPDATE**

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

|  |   |   |                                      |                                    |                                    |                                      |                                    |                                    |  |                                  |  |                                    |  |                                |                                    |                                    |                                   |  |
|--|---|---|--------------------------------------|------------------------------------|------------------------------------|--------------------------------------|------------------------------------|------------------------------------|--|----------------------------------|--|------------------------------------|--|--------------------------------|------------------------------------|------------------------------------|-----------------------------------|--|
| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____ | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Work Order Update <input type="checkbox"/> | <b>AGAINST DEPARTMENT/PROCESS</b><br><br><table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table> | Skid-tube <input type="checkbox"/>   | Crosstube <input type="checkbox"/> | Water Jet <input type="checkbox"/> | Engineering <input type="checkbox"/> | Machining <input type="checkbox"/> | Small Fab <input type="checkbox"/> | Prod. Eng. Coord. <input type="checkbox"/> | Quality <input type="checkbox"/> | Thermoforming <input type="checkbox"/> | Finishing <input type="checkbox"/> | Rec/Store/Packaging <input type="checkbox"/> | Other <input type="checkbox"/> | Large Fab <input type="checkbox"/> | Composite <input type="checkbox"/> | Supplier <input type="checkbox"/> |  |
| Skid-tube <input type="checkbox"/>                           | Crosstube <input type="checkbox"/>  | Water Jet <input type="checkbox"/>  | Engineering <input type="checkbox"/> |                                    |                                    |                                      |                                    |                                    |  |                                  |  |                                    |  |                                |                                    |                                    |                                   |  |
| Machining <input type="checkbox"/>                           | Small Fab <input type="checkbox"/>  | Prod. Eng. Coord. <input type="checkbox"/>  | Quality <input type="checkbox"/>     |                                    |                                    |                                      |                                    |                                    |  |                                  |  |                                    |  |                                |                                    |                                    |                                   |  |
| Thermoforming <input type="checkbox"/>                       | Finishing <input type="checkbox"/>  | Rec/Store/Packaging <input type="checkbox"/>  | Other <input type="checkbox"/>       |                                    |                                    |                                      |                                    |                                    |  |                                  |  |                                    |  |                                |                                    |                                    |                                   |  |
| Large Fab <input type="checkbox"/>                           | Composite <input type="checkbox"/>  | Supplier <input type="checkbox"/>   |                                      |                                    |                                    |                                      |                                    |                                    |  |                                  |  |                                    |  |                                |                                    |                                    |                                   |  |

| Root Cause                             | Date | Step | Qty | Description of work order update or Non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector |
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| Material <input type="checkbox"/>      |      |      |     |   |                   |                    |             |              |              |
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**FAULT CATEGORY**

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|--|---|---|--|---|

**Work Order ID 93054**

November-13-12 2:24:49 PM

**\*93054\***

Page 3

Item ID: D4095-045

Revision ID:

Item Name: Wearplate Assembly

Start Date: 13/11/2012 Start Qty: 8.00

Required Date: 27/11/2012 Req'd Qty: 8.00

Reference:

Accept

**\*N900040100\***Setup Start **\*NS1\***Stop **\*NS2\***

Cust Item ID:

Customer:

Approvals: Process Plan: Date:

QC: Date:

Tooling: Date:

SPC (Y/N): Date:

Run Start **\*NR1\***Stop **\*NR2\***Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

160

QC3- Inspect Part Finish

0.00

**\*160\***

QC

Memo

0.00

DAS  
16  
9-13 21/23

(11)

Quality Control

170

Identify as per dwg & Stock Location: **FP-1**

0.00

**\*170\***

Packaging

Memo

0.00

Packaging

11  $\phi$  BL 12-11-23

180

QC21- Final Inspection - Work Order Release

0.00

**\*180\***

QC

Memo

0.00

Quality Control

12/11/23

mf  
12-11-23

NCR: Yes / No

**WORK ORDER NON-CONFORMANCE / UPDATE**

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

|  |   |   |                                      |                                    |                                    |                                      |                                    |                                    |  |                                  |  |                                    |  |                                |                                    |                                    |                                   |  |
|--|---|---|--------------------------------------|------------------------------------|------------------------------------|--------------------------------------|------------------------------------|------------------------------------|--|----------------------------------|--|------------------------------------|--|--------------------------------|------------------------------------|------------------------------------|-----------------------------------|--|
| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____ | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Work Order Update <input type="checkbox"/> | <b>AGAINST DEPARTMENT/PROCESS</b><br><br><table style="width: 100%; border: none;"> <tr> <td style="width: 25%;">Skid-tube <input type="checkbox"/></td> <td style="width: 25%;">Crosstube <input type="checkbox"/></td> <td style="width: 25%;">Water Jet <input type="checkbox"/></td> <td style="width: 25%;">Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table> | Skid-tube <input type="checkbox"/>   | Crosstube <input type="checkbox"/> | Water Jet <input type="checkbox"/> | Engineering <input type="checkbox"/> | Machining <input type="checkbox"/> | Small Fab <input type="checkbox"/> | Prod. Eng. Coord. <input type="checkbox"/> | Quality <input type="checkbox"/> | Thermoforming <input type="checkbox"/> | Finishing <input type="checkbox"/> | Rec/Store/Packaging <input type="checkbox"/> | Other <input type="checkbox"/> | Large Fab <input type="checkbox"/> | Composite <input type="checkbox"/> | Supplier <input type="checkbox"/> |  |
| Skid-tube <input type="checkbox"/>                           | Crosstube <input type="checkbox"/>  | Water Jet <input type="checkbox"/>  | Engineering <input type="checkbox"/> |                                    |                                    |                                      |                                    |                                    |  |                                  |  |                                    |  |                                |                                    |                                    |                                   |  |
| Machining <input type="checkbox"/>                           | Small Fab <input type="checkbox"/>  | Prod. Eng. Coord. <input type="checkbox"/>  | Quality <input type="checkbox"/>     |                                    |                                    |                                      |                                    |                                    |  |                                  |  |                                    |  |                                |                                    |                                    |                                   |  |
| Thermoforming <input type="checkbox"/>                       | Finishing <input type="checkbox"/>  | Rec/Store/Packaging <input type="checkbox"/>  | Other <input type="checkbox"/>       |                                    |                                    |                                      |                                    |                                    |  |                                  |  |                                    |  |                                |                                    |                                    |                                   |  |
| Large Fab <input type="checkbox"/>                           | Composite <input type="checkbox"/>  | Supplier <input type="checkbox"/>   |                                      |                                    |                                    |                                      |                                    |                                    |  |                                  |  |                                    |  |                                |                                    |                                    |                                   |  |

| Root Cause                             | Date | Step | Qty | Description of work order update or Non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector |
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| Material <input type="checkbox"/>      |      |      |     |   |                   |                    |             |              |              |
| Setup <input type="checkbox"/>         |      |      |     |   |                   |                    |             |              |              |
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| Training <input type="checkbox"/>      |      |      |     |   |                   |                    |             |              |              |
| Unapproved <input type="checkbox"/>    |      |      |     |   |                   |                    |             |              |              |

**FAULT CATEGORY**

|  |   |   |  |   |
|--|---|---|--|---|
| <b>Landing Gear</b><br><input type="checkbox"/> Bending<br><input type="checkbox"/> Centre Not Concentric to O/S<br><input type="checkbox"/> Cracks<br><input type="checkbox"/> Crushed/Crimped.<br><input type="checkbox"/> Cuffs<br><input type="checkbox"/> Heat Treat<br><input type="checkbox"/> Inspection Strip in Tube<br><input type="checkbox"/> Ripples in Bend<br><input type="checkbox"/> Torque Waves in Extrusion<br><input type="checkbox"/> Turning Sequence<br><input type="checkbox"/> Wave/Twist in Tube | <b>General</b><br><input type="checkbox"/> Bend<br><input type="checkbox"/> BOM/Route<br><input type="checkbox"/> Broken/Damaged<br><input type="checkbox"/> Burrs<br><input type="checkbox"/> Contamination<br><input type="checkbox"/> Countersink<br><input type="checkbox"/> Cut Too Short<br><input type="checkbox"/> Drill Holes<br><input type="checkbox"/> Drawing<br><input type="checkbox"/> Finish<br><input type="checkbox"/> Folio | <input type="checkbox"/> Grain<br><input type="checkbox"/> Hardware<br><input type="checkbox"/> Inspection Incomplete<br><input type="checkbox"/> Instructions Incomplete/Unclear<br><input type="checkbox"/> Maintenance<br><input type="checkbox"/> Mislabeled<br><input type="checkbox"/> Misread<br><input type="checkbox"/> Offset<br><input type="checkbox"/> Out of Calibration<br><input type="checkbox"/> Out of Sequence<br><input type="checkbox"/> Outside Dimensions | <input type="checkbox"/> Ovalized<br><input type="checkbox"/> Over/Under tolerance<br><input type="checkbox"/> Part Incorrect<br><input type="checkbox"/> Part Lost/Missing<br><input type="checkbox"/> Part Moved<br><input type="checkbox"/> Positioned Wrong<br><input type="checkbox"/> Power Loss/Surge | <input type="checkbox"/> Pressure/Forced<br><input type="checkbox"/> Temperature/Cure<br><input type="checkbox"/> Weld<br><input type="checkbox"/> Wrong Stock Pulled<br><input type="checkbox"/> Other |
|--|---|---|--|---|

# Picklist Print

November-13-12 2:24:53 PM

Page 1

Work Order ID: 93054

\*93054\*

Parent Item: D4095-045

\*D4095-045\*

Parent Item Name: Wearplate Assembly

Start Date: 13/11/2012

Required Date: 27/11/2012

Start Qty: 8.00

Required Qty: 8.00

Comments: IPP REV:A 11.10.12 NEW ISSUE DD VERF:EC

| Component Item ID/<br>Item Name | Replacement<br>Item ID | Mfg/<br>Purch | Bin<br>Item | Primary<br>Location | Last<br>Location | Route<br>Seq ID | Unit of<br>Measure | Qty on<br>Hand | Qty per Kit | Total<br>Qty | Qty<br>Issued | Date<br>Issued | Status |
|---------------------------------|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|-------------|--------------|---------------|----------------|--------|
| M304S16GA                       |                        | Purchased     | No          |                     |                  | 100             | sf                 | 324.8080       | 1.03        | 8.673684     | 10            |                |        |

\*M304S16GA\*

304/316 Sheet .063

\*\*

B12-11-14

Location

Loc Qty

Loc Code

MAT020

324.808

122245

51.078

122753

49.63

123136

224.1

122753

11

NCR: Yes / No

**WORK ORDER NON-CONFORMANCE / UPDATE**

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

|  |   |   |                                      |                                    |                                    |                                      |                                    |                                    |  |                                  |  |                                    |  |                                |                                    |                                    |                                   |  |
|--|---|---|--------------------------------------|------------------------------------|------------------------------------|--------------------------------------|------------------------------------|------------------------------------|--|----------------------------------|--|------------------------------------|--|--------------------------------|------------------------------------|------------------------------------|-----------------------------------|--|
| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____ | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Work Order Update <input type="checkbox"/> | <b>AGAINST DEPARTMENT/PROCESS</b><br><br><table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table> | Skid-tube <input type="checkbox"/>   | Crosstube <input type="checkbox"/> | Water Jet <input type="checkbox"/> | Engineering <input type="checkbox"/> | Machining <input type="checkbox"/> | Small Fab <input type="checkbox"/> | Prod. Eng. Coord. <input type="checkbox"/> | Quality <input type="checkbox"/> | Thermoforming <input type="checkbox"/> | Finishing <input type="checkbox"/> | Rec/Store/Packaging <input type="checkbox"/> | Other <input type="checkbox"/> | Large Fab <input type="checkbox"/> | Composite <input type="checkbox"/> | Supplier <input type="checkbox"/> |  |
| Skid-tube <input type="checkbox"/>                           | Crosstube <input type="checkbox"/>  | Water Jet <input type="checkbox"/>  | Engineering <input type="checkbox"/> |                                    |                                    |                                      |                                    |                                    |  |                                  |  |                                    |  |                                |                                    |                                    |                                   |  |
| Machining <input type="checkbox"/>                           | Small Fab <input type="checkbox"/>  | Prod. Eng. Coord. <input type="checkbox"/>  | Quality <input type="checkbox"/>     |                                    |                                    |                                      |                                    |                                    |  |                                  |  |                                    |  |                                |                                    |                                    |                                   |  |
| Thermoforming <input type="checkbox"/>                       | Finishing <input type="checkbox"/>  | Rec/Store/Packaging <input type="checkbox"/>  | Other <input type="checkbox"/>       |                                    |                                    |                                      |                                    |                                    |  |                                  |  |                                    |  |                                |                                    |                                    |                                   |  |
| Large Fab <input type="checkbox"/>                           | Composite <input type="checkbox"/>  | Supplier <input type="checkbox"/>   |                                      |                                    |                                    |                                      |                                    |                                    |  |                                  |  |                                    |  |                                |                                    |                                    |                                   |  |

| Root Cause    | Date | Step | Qty | Description of work order update or Non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector |
|---------------|------|------|-----|---|-------------------|--------------------|-------------|--------------|--------------|
| Doc/Data      |      |      |     |   |                   |                    |             |              |              |
| Equip/Tooling |      |      |     |   |                   |                    |             |              |              |
| Operator      |      |      |     |   |                   |                    |             |              |              |
| Material      |      |      |     |   |                   |                    |             |              |              |
| Setup         |      |      |     |   |                   |                    |             |              |              |
| Other         |      |      |     |   |                   |                    |             |              |              |
| Process       |      |      |     |   |                   |                    |             |              |              |
| Supplier      |      |      |     |   |                   |                    |             |              |              |
| Training      |      |      |     |   |                   |                    |             |              |              |
| Unapproved    |      |      |     |   |                   |                    |             |              |              |

**FAULT CATEGORY**

| Landing Gear  | General                                 | Other  |
|---|---|--|
| <input type="checkbox"/> Bending                      | <input type="checkbox"/> Bend           | <input type="checkbox"/> Grain                           |
| <input type="checkbox"/> Centre Not Concentric to O/S | <input type="checkbox"/> BOM/Route      | <input type="checkbox"/> Hardware                        |
| <input type="checkbox"/> Cracks                       | <input type="checkbox"/> Broken/Damaged | <input type="checkbox"/> Inspection Incomplete           |
| <input type="checkbox"/> Crushed/Crimped              | <input type="checkbox"/> Burrs          | <input type="checkbox"/> Instructions Incomplete/Unclear |
| <input type="checkbox"/> Cuffs                        | <input type="checkbox"/> Contamination  | <input type="checkbox"/> Maintenance                     |
| <input type="checkbox"/> Heat Treat                   | <input type="checkbox"/> Countersink    | <input type="checkbox"/> Mislabeled                      |
| <input type="checkbox"/> Inspection Strip in Tube     | <input type="checkbox"/> Cut Too Short  | <input type="checkbox"/> Misread                         |
| <input type="checkbox"/> Ripples in Bend              | <input type="checkbox"/> Drill Holes    | <input type="checkbox"/> Offset                          |
| <input type="checkbox"/> Torque Waves in Extrusion    | <input type="checkbox"/> Drawing        | <input type="checkbox"/> Out of Calibration              |
| <input type="checkbox"/> Turning Sequence             | <input type="checkbox"/> Finish         | <input type="checkbox"/> Out of Sequence                 |
| <input type="checkbox"/> Wave/Twist in Tube           | <input type="checkbox"/> Folio          | <input type="checkbox"/> Outside Dimensions              |
|   |   | <input type="checkbox"/> Ovalized                        |
|   |   | <input type="checkbox"/> Over/Under tolerance            |
|   |   | <input type="checkbox"/> Part Incorrect                  |
|   |   | <input type="checkbox"/> Part Lost/Missing               |
|   |   | <input type="checkbox"/> Part Moved                      |
|   |   | <input type="checkbox"/> Positioned Wrong                |
|   |   | <input type="checkbox"/> Power Loss/Surge                |
|   |   | <input type="checkbox"/> Pressure/Forced                 |
|   |   | <input type="checkbox"/> Temperature/Cure                |
|   |   | <input type="checkbox"/> Weld                            |
|   |   | <input type="checkbox"/> Wrong Stock Pulled              |
|   |   | <input type="checkbox"/> Other                           |

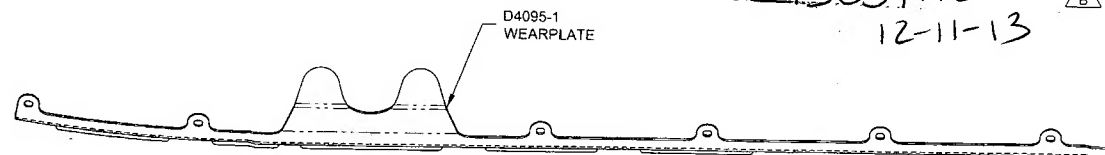




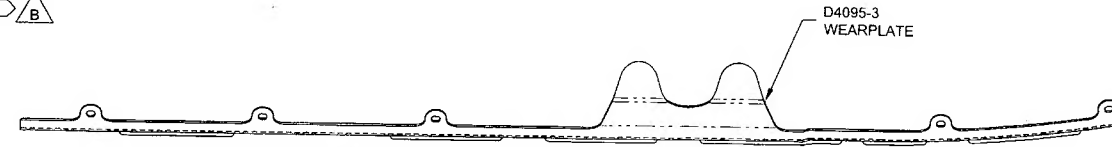
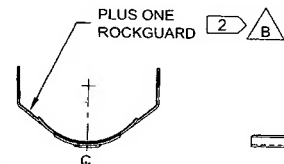
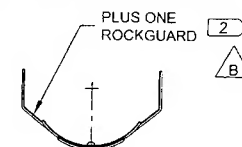
SHO...  
RE...  
ENGINE...  
UNCONTROL...  
SUBJECT TO AVEN...  
WITHOUT...  
WORK OR...

NO. 93054 MLC  
12-11-13

| ITEM | QTY<br>-041 | QTY<br>-043 | QTY<br>-045 | QTY<br>-047 | QTY<br>-049 | QTY<br>-051 | PART NUMBER | DESCRIPTION                    |
|------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------------------------|
| 1    | X           |             |             |             |             |             | D4095-041   | WEARPLATE ASSEMBLY             |
| 2    |             | X           |             |             |             |             | D4095-043   | WEARPLATE ASSEMBLY             |
| 3    |             |             | X           |             |             |             | D4095-045   | WEARPLATE ASSEMBLY             |
| 4    |             |             |             | X           |             |             | D4095-047   | WEARPAD ASSEMBLY               |
| 5    |             |             |             |             | X           |             | D4095-049   | WEARPAD ASSEMBLY               |
| 6    |             |             |             |             |             | X           | D4095-051   | WEARPAD ASSEMBLY               |
| 7    | 1           |             |             |             |             |             | D4095-1     | WEARPLATE                      |
| 8    |             | 1           |             |             |             |             | D4095-3     | WEARPLATE                      |
| 9    |             |             | 1           |             |             |             | D4095-5     | WEARPLATE                      |
| 10   |             |             |             | 1           |             |             | D4095-7     | WEARPAD                        |
| 11   |             |             |             |             | 1           |             | D4095-9     | WEARPAD                        |
| 12   |             |             |             |             |             | 1           | D4095-11    | WEARPAD                        |
| 13   | A/R         | A/R         | A/R         | A/R         | A/R         | A/R         | 4715 (4714) | PLUS ONE ROCKGUARD BLACK (TAN) |



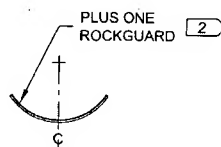
**D4095-041 WEARPLATE ASSEMBLY**



**D4095-043 WEARPLATE ASSEMBLY**



**D4095-045 WEARPLATE ASSEMBLY**



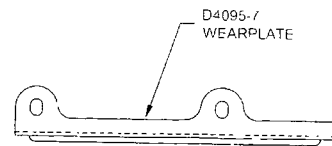
**D4095-041/-043/-045/-047/-049/-051 NOTES:**

- 1) MATERIAL: N/A
- 2) FINISH: COAT ENTIRE TOP (CONCAVE) SURFACE WITH PLUS ONE ROCKGUARD 4714 OR 4715, 0.02-0.04 THICK
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D4095-0XX" AND B/N "BXXXXX" USING REMOVABLE TAG PER QSI 044 6.6
- 7) WEIGHT: D4095-041 = 3.08 lbs; D4095-043 = 3.08 lbs; D4095-045 = 2.00 lbs; D4095-047 = 0.48 lbs; D4095-049 = 0.42 lbs; D4095-051 = 0.37 lbs
- 8) PARTS ARE SYMMETRIC ABOUT C

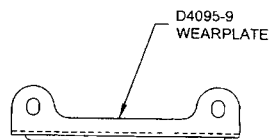
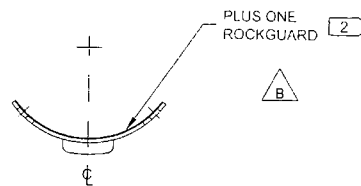
|            |   |     |          |
|------------|---|-----|----------|
| B          | REVISED D4095-1/-1F/3/3F: 4715 PLUS ONE ROCKGUARD REPLACES D4096-1/-3; ADDED D4095-SI-7 -9/-11; REVISED HARDCOAT DESIGN; REVISED NOTE 2 | XDF | 11.10.18 |
| A          | NEW ISSUE   | MB  | 10.04.20 |
| REV.       | DESCRIPTION   | BY  | DATE     |
| DESIGN     |   |     |          |
| DRAWN      | XDF   |     |          |
| CHECKED    | NO  |     |          |
| MFG. APPR. | NO  |     |          |
| APPROVED   | NO  |     |          |
| DE APPR.   | NO  |     |          |
| DATE       | 11.10.18  |     |          |

**DART AEROSPACE USA, INC**  
KENT, WA  
DRAWING NO. D4095  
REV. B  
SHEET 1 OF 8  
TITLE WEARPLATE  
SCALE NTS  
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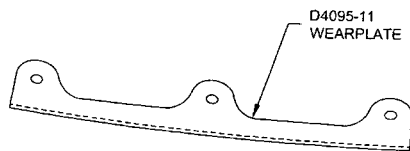
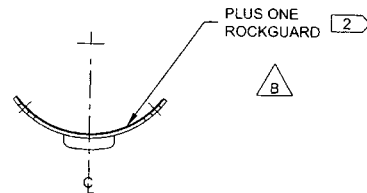
93054



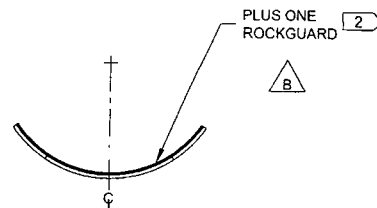
**D4095-047 WEAR PAD ASSEMBLY**



**D4095-049 WEAR PAD ASSEMBLY**



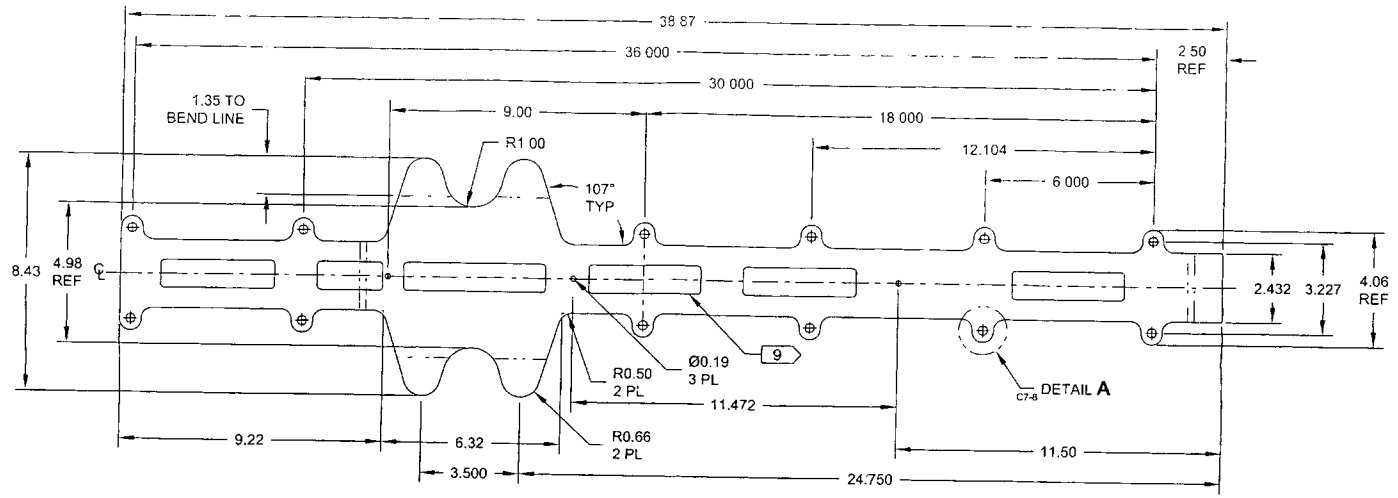
**D4095-051 WEARPAD ASSEMBLY**



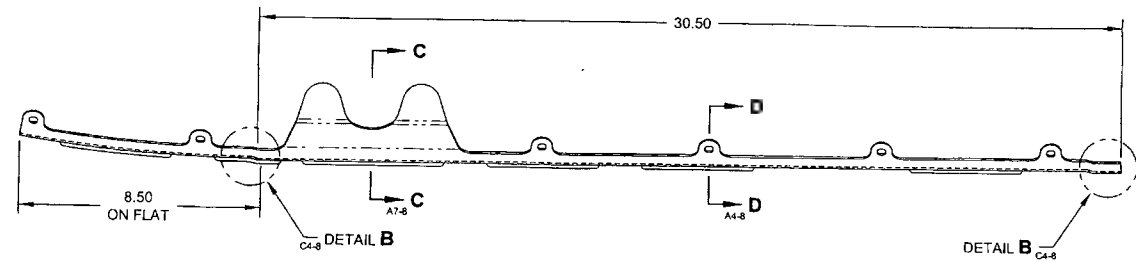
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2011-10-31

|            |          |   |              |
|------------|----------|---|--------------|
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| DRAWN      | XDF      | KENT, WA  |              |
| CHECKED    | 10       | DRAWING NO  | REV. B       |
| MFG. APPR. | 10       | D4095   | SHEET 2 OF 8 |
| APPROVED   | 10       | TITLE   | SCALE        |
| DE APPR.   | 10       | WEARPLATE   | NTS          |
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**D4095-1F FLAT PATTERN** 1



**D4095-1 BENDING DETAIL**  
(MAKE FROM D4095-1F)

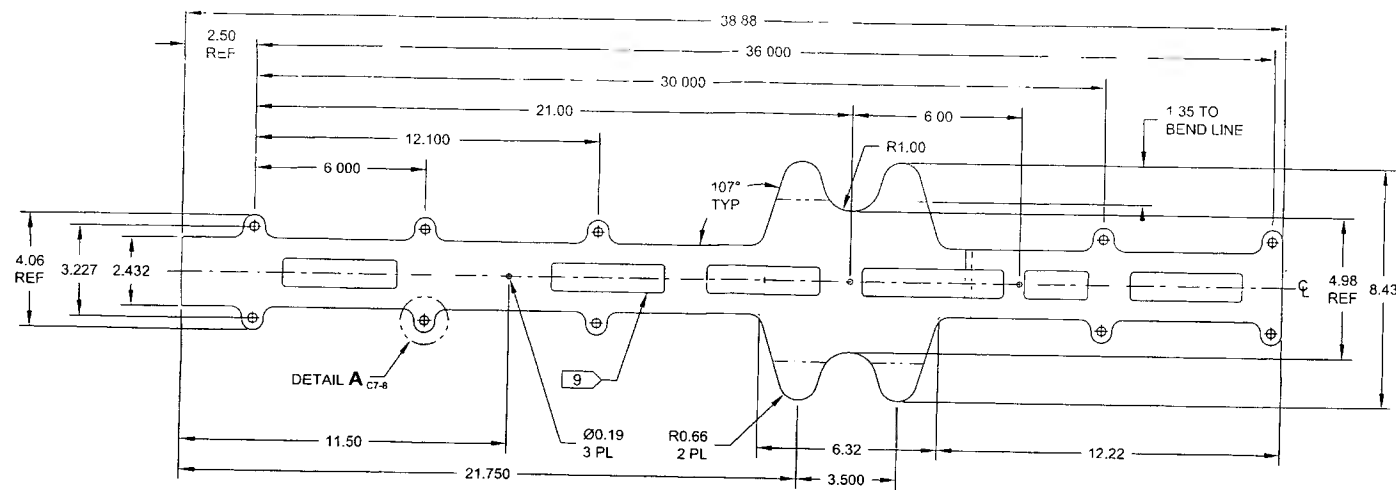
RECEIVED  
2011-10-31

**D4095-1/1F/3/3F/5/5F/7/7F/9/9F/11/11F NOTES:**

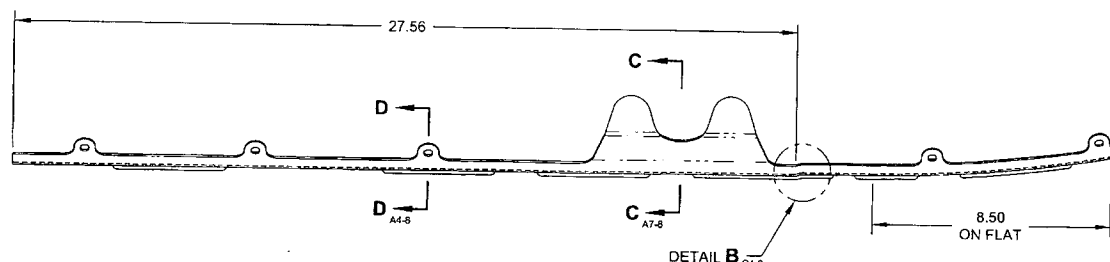
- 1) MATERIAL: AISI 304/316 SS SHEET ANNEALED 2B FINISH, 16 GAUGE (0.063 THICK)  
PER AMS 5513 (304) OR AMS 5524 (316), OR ASTM A240 OR ASME SA240  
REF DART MATERIAL SPEC M304S16GA
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.015 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: D4095-1 = 3.00 lbs; D4095-3 = 3.00 lbs; 4095-5 = 1.96 lbs; D4095-7 = 0.47 lbs; D4095-9 = 0.41 lbs; D4095-13 = 0.36 lbs
- 8) WELDING: PER DART QSI 004
- 9) PARTS ARE SYMMETRIC ABOUT C

|   |          |   |              |
|---|----------|---|--------------|
| DESIGN  |          | <b>DART AEROSPACE USA, INC</b>              |              |
| DRAWN   | XDF      | KENT, WA                                    |              |
| CHECKED   | 10       | DRAWING NO.                                 | REV. B       |
| MFG. APPR.  | 10       | D4095                                       | SHEET 3 OF 8 |
| APPROVED  | 10       | TITLE                                       | SCALE        |
| DE APPR   | 10       | WEARPLATE                                   | NTS          |
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**D4095-3F FLAT PATTERN** 1

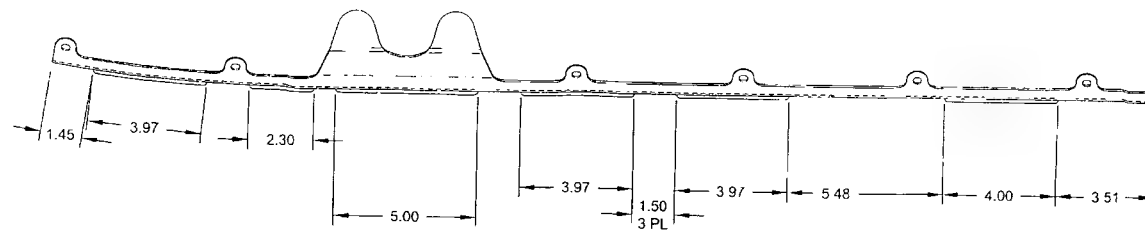


**D4095-3 BENDING DETAIL**  
(MAKE FROM D4095-3F)

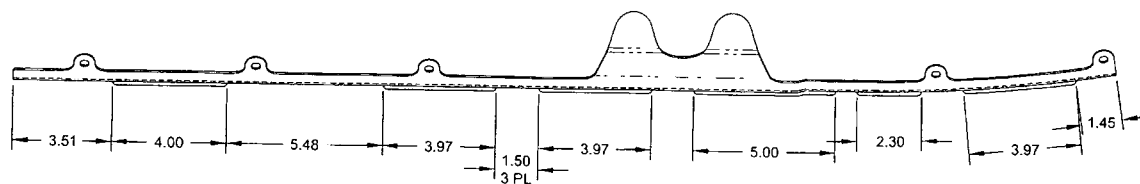
RELEASE  
2011-10-31

|            |                    |  |              |
|------------|--------------------|--|--------------|
| DESIGN     |                    | <b>DART AEROSPACE USA, INC</b>   |              |
| DRAWN      | XDF                | KENT, WA   |              |
| CHECKED    | <i>[Signature]</i> | DRAWING NO.  | REV. B       |
| MFG. APPR. | <i>[Signature]</i> | D4095  | SHEET 4 OF 8 |
| APPROVED   | <i>[Signature]</i> | TITLE  | SCALE        |
| DE APPR.   | <i>[Signature]</i> | WEARPLATE  | NTS          |
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





**D4095-1 WELDING DETAIL** 

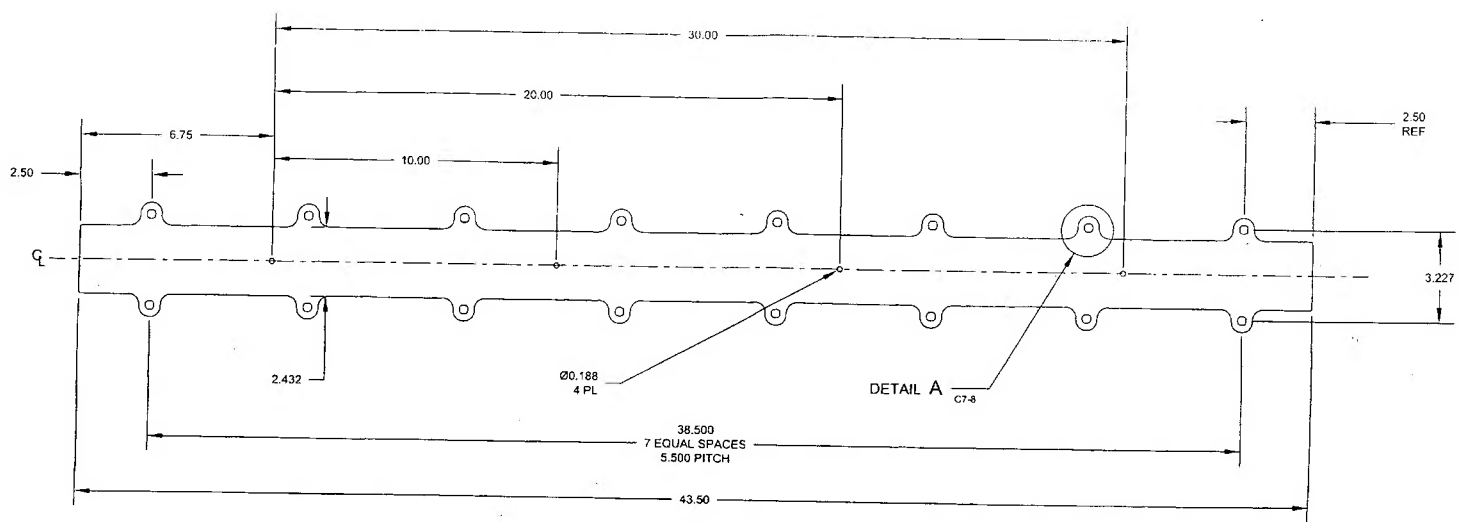


**D4095-3 WELDING DETAIL** 

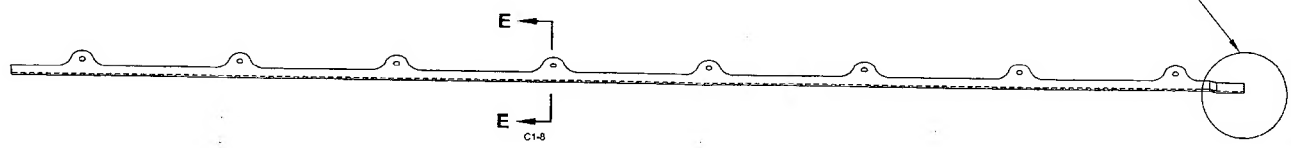
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2011-10-31  
MD

|            |   |   |              |
|------------|---|---|--------------|
| DESIGN     |   | <b>DART AEROSPACE USA, INC</b>  |              |
| DRAWN      | XDF   | KENT, WA  |              |
| CHECKED    |  | DRAWING NO.   | REV. B       |
| MFG. APPR. |  | D4095   | SHEET 5 OF 8 |
| APPROVED   |  | TITLE   | SCALE        |
| DE APPR.   |  | WEARPLATE   | NTS          |
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**D4095-5F FLAT PATTERN**



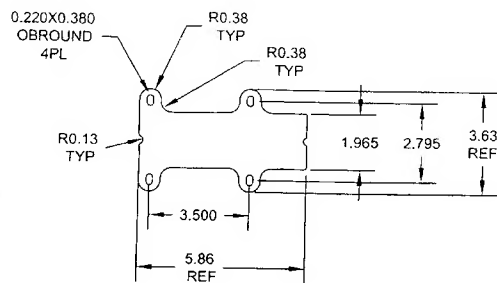
**D4095-5 BENDING DETAIL**  
(MAKE FROM D4095-5F)

RELEASED  
2011-10-31  
MM

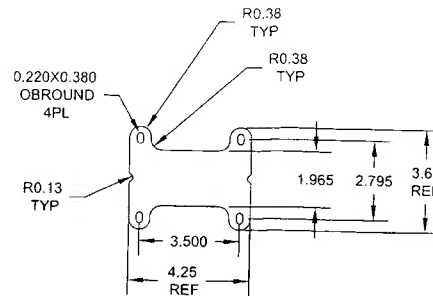
|            |          |                         |
|------------|----------|-------------------------|
| DESIGN     |          | DART AEROSPACE USA, INC |
| DRAWN      | XDF      | KENT, WA                |
| CHECKED    | 10       | DRAWING NO. REV. B      |
| MFG. APPR. | 10       | D4095 SHEET 6 OF 8      |
| APPROVED   | 10       | TITLE SCALE             |
| DE APPR.   | 10       | WEARPLATE NTS           |
| DATE       | 11.10.18 |                         |

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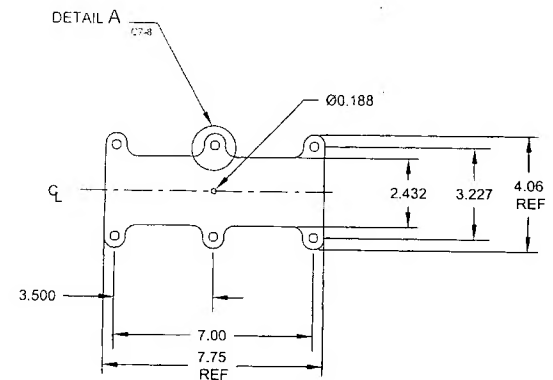
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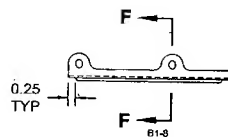
**D4095-7F FLAT PATTERN** 1



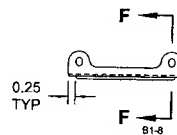
**D4095-9F FLAT PATTERN** 1



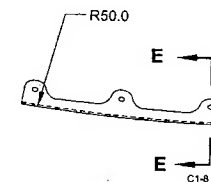
**D4095-11F FLAT PATTERN** 1



**D4095-7 LONGITUDINAL BEND**  
(MADE FROM D4095-7F)



**D4095-9 LONGITUDINAL BEND**  
(MADE FROM D4095-9F)



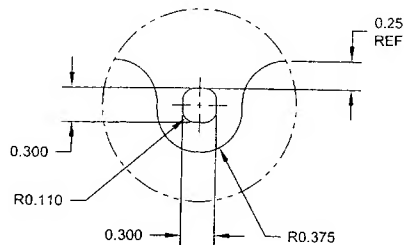
**D4095-11 BENDING DETAIL**  
(MAKE FROM D4095-11F)

2011-10-31

|  |          |   |              |
|--|----------|---|--------------|
| DESIGN   |          | <b>DART AEROSPACE USA, INC</b>              |              |
| DRAWN  | XDF      | KENT, WA                                    |              |
| CHECKED  | 140      | DRAWING NO.                                 | REV. B       |
| MFG. APPR.   | 140      | D4095                                       | SHEET 7 OF 8 |
| APPROVED   | 140      | TITLE                                       | SCALE        |
| DE APPR.   | 140      | WEARPLATE                                   | NTS          |
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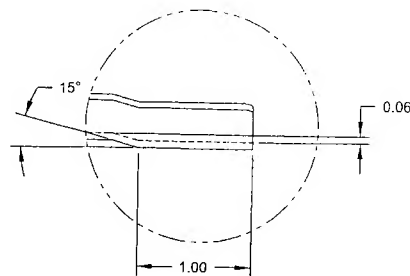
93054



**DETAIL A: TAB DETAIL**

SCALE 4X

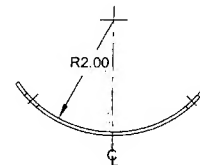
C3-3  
C6-4  
D3-6  
D2-7



**DETAIL B: JOGGLE DETAIL**

SCALE 4X

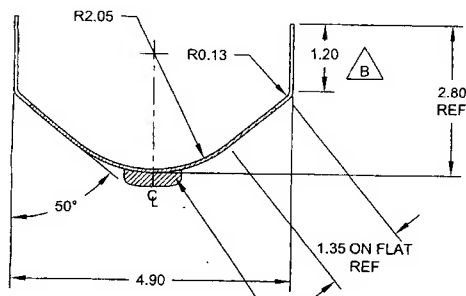
B2-3  
B6-3  
B3-4  
B2-6



**SECTION E-E**

SCALE 2X

RELEASED  
2011-10-31  
NPD

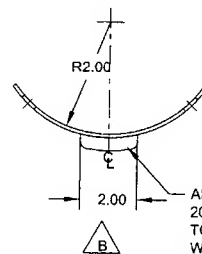


**SECTION C-C**

SCALE 2X

B5-3  
B4-4

APPLY 2 LAYERS OF  
2059B HARDCOAT WELDS  
TO WITHIN 0.25 OF  
WEARPAD ENDS  
0.188 TO 0.250 THICK

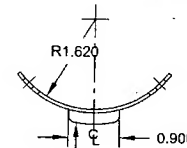


**SECTION D-D**

SCALE 2X

B4-3  
B5-4

APPLY 2 LAYERS OF  
2059B HARDCOAT WELDS  
TO WITHIN 0.25 OF  
WEARPAD ENDS  
0.188 TO 0.250 THICK



**SECTION F-F**

SCALE 2X

B5-7  
B7-7

APPLY 2 LAYERS OF  
2059B HARDCOAT WELDS  
TO WITHIN 0.25 OF  
WEARPAD ENDS  
0.188 TO 0.250 THICK

|  |                    |   |              |
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| APPROVED   | <i>[Signature]</i> | TITLE                                       | SCALE        |
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